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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,184	11/11/2003	Batakrishna Mandal	1391-24708	4647

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EXAMINER

WALKER, ZAKIYA NICOLE

ART UNIT PAPER NUMBER

3672

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,184

Applicant(s)

MANDAL, BATAKRISHNA

Examiner

Zakiya N. Walker

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2003 and 08 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-15 and 17-22 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11112003
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

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1. The preliminary amendments filed 11/11/03 and 3/08/04 have been entered, and an action on the merits follows.

Specification

2. The abstract of the disclosure is objected to because of the use of the term "[t]he present invention" in line 1, and "is disclosed" in line 5. Correction is required. See MPEP § 608.01(b).
3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The disclosure is objected to because of the following informalities: page 1, the first sentence should be updated to include --U.S. patent 6,712,138--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 12-15 and 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Mandal et al.'861 (cited by applicant).

Mandal et al. discloses an apparatus that includes a tool for measuring one or more fluid properties that comprises: a body having an associated volume through which a fluid may pass; a surface fixed within the volume to contact the fluid; and an acoustic transducer affixed to the body and configured to receive acoustic signal reflections and reverberations from the surface. With respect to depending claims 13-15 and 17-22, the reference teaches the limitations as claimed, including: a metallic/steel surface with opposite sides (top bottom) contacting fluid; a processor; and acoustic impedance, density, and acoustic velocity borehole fluid properties.

7. Claims 12-15, 17, and 19-22 are rejected under 35 U.S.C. 102(b) as anticipated by Maki, Jr. or, in the alternative, under 35 U.S.C. 103(a) as obvious over Birchak et al. (cited by applicant).

Maki, Jr. discloses an apparatus that includes a tool for measuring one or more fluid properties that comprises: a body having an associated volume through which a fluid may pass; a surface 14 fixed within the volume to contact the fluid; and an acoustic transducer 20, 26 affixed to the body and configured to receive acoustic signal

Art Unit: 3672

reflections and reverberations from the surface (see particularly Fig. 3, Figs. 4a-c and col. 4, lines 25-40). With respect to depending claims 13-15, 17, and 19-22, the reference teaches the limitations as claimed, including: a metallic/steel surface with opposite sides (top bottom) contacting fluid; a processor 80; and density and acoustic velocity borehole fluid properties. With respect to the density determination requirement, the reference uses the term "attenuation values" may be determined (col. 4, lines 10-13), which is defined as *reduced density* values.

Birchak et al. teaches an acoustic device for measuring fluid properties that includes a transducer 36 and plate/surface 25, 34 for the purpose of determining fluid density.

It would have been considered obvious to one of ordinary skill in the art at the time the invention was made to have determined fluid density in view of Birchak et al. in order to obtain the desired fluid property values.

Allowable Subject Matter


8. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zakiya N. Walker whose telephone number is (703) 305-0302. The examiner can normally be reached on Tuesday-Friday, 6:30 AM-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (703) 308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Zakiya N. Walker
Primary Examiner
Art Unit 3672

ZW
November 22, 2004